# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

09 Nov 2026

## The evaluation of location of low level laser irradiation on reducing the pain after endodontic treatment in patients with symptomatic irreversible pulpitis

## Protocol summary

**Summary**

The purpose of this study is the evaluation of effects of location of low level laser irradiation on reducing the pain after endodontic treatment in patients with symptomatic irreversible pulpitis. This study will be done on first and second mandibular molar of 150 patients between 18 - 60 years old with tooth decay and diagnosis of symptomatic irreversible pulpitis. patients will be asked to record their initial pain on VAS. then will be divided into to groups : experimental(50 person) and placebo(25 person) treatment group will be divided into 2 subgroups of "buccal irradiation" and "buccal and lingual irradiation" Distribution of gender and average age and the presence of spontaneous pain in the subgroups will be even. group 1 : laser placebo : sham irradiation group 2 : laser group : *once laser irradiation (diode 808nm) *twice laser irradiation (diode 808nm) endodontic treatment of all patients will be done by endodontic specialist, in one meeting, with one technique and in the interval between 75 to 90 minutes. after completion of endodontic treatment, in first subgroup, low level laser irradiates on buccal mucosa covering the mesial and distal roots for 80 seconds and in second subgroup the same procedure will be done on both buccal and lingual. patients will be asked to fill the VAS questionnaire at 4,8,24 and 48 hours after treatment. data will be compared and the final report will be prepared.

## General information

**Acronym**

**IRCT registration information**

IRCT registration number: **IRCT2017021432576N1**
Registration date: **2017-07-01, 1396/04/10**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

**Registration date**

2017-07-01, 1396/04/10

**Registrant information**

**Name**
Elham Moghadas
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**Recruitment status**

**Recruitment complete**

**Funding source**

Personal and School of Dentistry, Shahid Beheshti University of Medical Sciences

**Expected recruitment start date**

2017-06-22, 1396/04/01

**Expected recruitment end date**

2017-08-23, 1396/06/01

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

The evaluation of location of low level laser irradiation on reducing the pain after endodontic treatment in patients with symptomatic irreversible pulpitis

**Public title**

The evaluation of effects of location of low level laser

irradiation on reducing the pain after endodontic treatment

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

Inclusion criteria: Systemic healthy patients; Between 18 - 60 yrs; Have first or second mandibular molar with irreversible pulpitis; No periapical lesion in the radiography; Mobility less than 0.5mm at every direction; Probe less than 3mm in mesial and distal; Get a written consent from the patient Exclusion criteria: Existence of systemic disease; Lactation and pregnancy; Sensitivity to lidocaine; Absence of pulp exposure after decay removal; Errors during endodontic treatment

**Age**

From **18 years** old to **60 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **75**

**Randomization (investigator's opinion)**

Not randomized

**Randomization description**

**Blinding (investigator's opinion)**

Double blinded

**Blinding description**

**Placebo**

Used

**Assignment**

Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

**Ethics committee**

**Name of ethics committee**

Ethics committee of Shahid Beheshti University of Medical Sciences

**Street address**

Shahid Beheshti University of Medical Sciences, Daneshju Blvd, Evin, Shahid Chamran Highway, Tehran

**City**

Tehran

**Postal code**

**Approval date**

2017-02-18, 1395/11/30

**Ethics committee reference number**

IR.SBMU.RIDS.1395.357

## Health conditions studied

### 1

**Description of health condition studied**

symptomatic irreversible pulpitis

**ICD-10 code**

K04.0

**ICD-10 code description**

Pulpitis

## Primary outcomes

### 1

**Description**

pain

**Timepoint**

4,8,24 and 48 hours after treatment

**Method of measurement**

with visual analogue scale questionnaire

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**

low level laser irradiation after treatment in first subgroup of experimental group: in this subgroup low level irradiation (Diode 808nm) will be done once for 80 seconds on buccal mucosa covering mesial and distal roots of the tooth.

**Category**

Treatment - Other

### 2

**Description**

low level laser irradiation after treatment in second subgroup of experimental group: in this subgroup low level irradiation (Diode 808nm) will be done twice on both buccal and lingual mucosa covering mesial and distal roots of the tooth for 80 seconds for per side.

**Category**

Treatment - Other

### 3

**Description**

sham irradiation after treatment in placebo group

**Category**

Placebo

## Recruitment centers

### 1

**Recruitment center**

**Name of recruitment center**
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## Sponsors / Funding sources

### 1

**Sponsor**
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**Grant name**
**Grant code / Reference number**
**Is the source of funding the same sponsor organization/entity?**
Yes
**Title of funding source**
School of Dentistry, Shahid Beheshti University of Medical Sciences
**Proportion provided by this source**
100
**Public or private sector**
*empty*
**Domestic or foreign origin**
*empty*
**Category of foreign source of funding**
*empty*
**Country of origin**
**Type of organization providing the funding**
*empty*

## Person responsible for general inquiries

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## Person responsible for scientific inquiries

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Department of Endodontics, School of Dentistry, Shahid Beheshti University of Medical Sciences
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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**
*empty*
**Study Protocol**
*empty*
**Statistical Analysis Plan**
*empty*
**Informed Consent Form**
*empty*
**Clinical Study Report**
*empty*
**Analytic Code**
*empty*
**Data Dictionary**
*empty*